

Simplify each of the following.

$$2. \frac{\frac{7}{3} + \frac{1}{w}}{\frac{2}{w} - \frac{1}{3}}$$

$$9. \frac{1+a^{-1}}{a-a^{-1}}$$

$$3. \frac{\frac{a-b}{a}}{\frac{a}{b}-1}$$

$$10. \frac{x^{-1}+y^{-1}}{x^{-1}-y^{-1}}$$

$$4. \frac{x-\frac{1}{x}}{1-\frac{1}{x}}$$

$$11. \frac{x^{-2}-1}{1+x^{-1}}$$

$$5. \frac{\frac{1}{x}-\frac{1}{y}}{\frac{1}{x}+\frac{1}{y}}$$

$$12. \frac{\frac{1}{4x^2}-1}{2-x^{-1}}$$

$$6. \frac{n-\frac{1}{n}}{\frac{1-n^2}{n}}$$

$$13. \frac{xy^{-1}+z}{xz^{-1}+y}$$

$$7. \frac{1-\frac{1}{x}}{x-2+\frac{1}{x}}$$

$$14. \frac{\frac{x}{x+1}}{1-\frac{x}{x+1}}$$

$$8. \frac{\frac{a}{a+b}}{1-\frac{b}{a+b}}$$

$$15. \frac{xy^{-1}+1}{2+x^{-1}}$$

$$16. \frac{4u^{-1} + (uv)^{-1}}{v^{-1} - 5}$$

$$23. \frac{\frac{3}{x-2} - \frac{3}{x+2}}{\frac{12}{x^2-4}}$$

$$17. \frac{t^{-1} + 2^{-1}}{3t^{-1} - 3^{-1}}$$

$$18. \frac{1 + \frac{4}{x} + \frac{3}{x^2}}{1 - \frac{9}{x^2}}$$

$$19. \frac{\frac{3}{b} - 1}{1 - \frac{6}{b} + \frac{9}{b^2}}$$

$$20. \frac{1 + \frac{2}{y} - \frac{24}{y^2}}{1 + \frac{4}{y} - \frac{12}{y^2}}$$

$$21. \frac{\frac{1}{k} - \frac{3}{k^2} + \frac{2}{k^3}}{\frac{1}{k} - \frac{4}{k^2} + \frac{4}{k^3}}$$

$$22. \frac{1 + \frac{7}{y-2}}{1 + \frac{3}{y+2}}$$